# Q-See®

## QSC13212D

Hi-Resolution CCD Color Camera
With 2.8 to 12MM Varifocal Lens
And Built-in On Screen Display



## Product Manual

Thank you for purchasing our products. Please read the manual carefully before using and keep it for future reference.

 **W A R N I N G** 

To reduce the danger of electric shock, and avoid lightning strikes, do not tamper with the wiring or connections to the camera's circuit board, and make sure the unit is properly grounded. Unit should only be serviced by authorized repairmen. Contact Q-See for any needed repairs.

# Other Precautions:

☆ Please make sure the power adapter is consistent with product specifications, otherwise it might cause fire, electric shock or damage.

☆ Pay attention to polarity of the adapter, it might cause some accidents like fires.

☆ Please don't connect multiple cameras with the same adapter at the same time; overloading of adapter capacity may cause fire.

☆ Power supply must be firmly fixed to prevent fires.

☆ If the device produces an abnormal smell or smoke, please stop using it immediately and contact our customer service dept.

☆ If the camera doesn't work as usual, please do not dismantle it by yourself. Please contact our company to preserve warranty status.

☆ Please do not touch the camera lens or sensor.

# Notes

1. Avoid strong impact and stay away from strong electromagnetic interference and vibration.

2. There are some sophisticated parts inside the camera, therefore, during transportation and installation, please avoid damage caused by stress or severe vibration. For the sake of safety, please do not switch on power before completing all installation.

3. Please comply with all electrical safety standards during operation, camera or signal transmission cable should maintain a sufficient distance (50 meters, 165 feet) from high-voltage equipment or cables, precautions should also be taken to avoid lightening.

4. Please install the camera in well-ventilated environment.

5. Please do not position the camera facing direct sunlight or other strong light source; this could damage the lens and sensor.

6. The temperature range for the cameras are -20 ~ 50 °C (-4 to 122°F)

7. To avoid lightning strikes, please make sure the power supply ground line is in good condition.

# Directory

# 1. **Features**

**1. New Generation SONY CCD**
Adopting the latest Second-generation high-sensitive CCD, it can receive clear and lucid images even with very low illumination.

**2. Hi-resolution Video Resolution**
Color horizontal resolution can reach 550TVL, B/W horizontal resolution can reach 600TVL.

**3. Day & Night Switch**
Day & Night cameras can switch automatically into color or B/W according to available light.

**4. Digital Wide Dynamic Technology**
Built-in special digital wide dynamic technology enables camera to see all views inside and outside house even in strong or weak light.

**5. DNR (Digital Noise Reduction) Technology**
Enhanced ability to handle signal noise ratio, this technology enables the camera to receive clearer and more vivid images even under low-light conditions.

**6. Gamma Curve**
Variable gamma adjustment, there are four different curve options.

**7. Multi-Zone Backlight Compensation Setting**
Backlight compensation can automatically adjust the light to achieve overall optimization of the image, even in high contrast environment such as between dark and strong light.

**8. Multi-Zone Privacy Setting (PRIVACY)**
Privacy can be divided into different zones.

**9. OSD (On Screen Display)**
Built-in OSD, the user can easily set the camera parameters through menu.

# 2. Dimensions and Accessories

Dome Camera
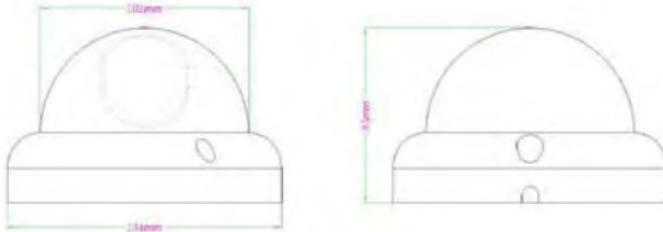


Dome Camera
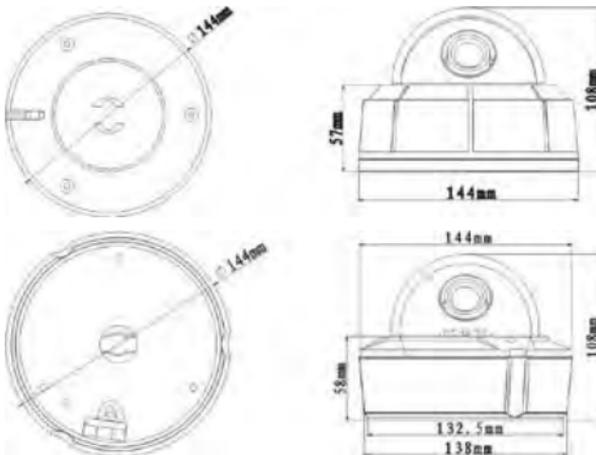


2.2 Accessories

| Item | Accessories | Quantity | Remark |
|------|-------------|----------|--------|
| 1 | Product Manual | 1 PC | Standard |
| 2 | Customer Info Card | 1 PC | Standard |
| 3 | Fixed Screws | 1 Set | Dome Camera |

# 3. Installation



1. Release screws to open the cover
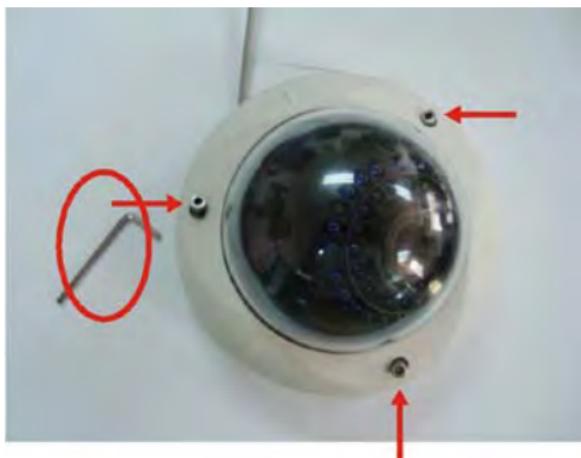


2. Use the pictured tool to take off the screws

3. Open the cover
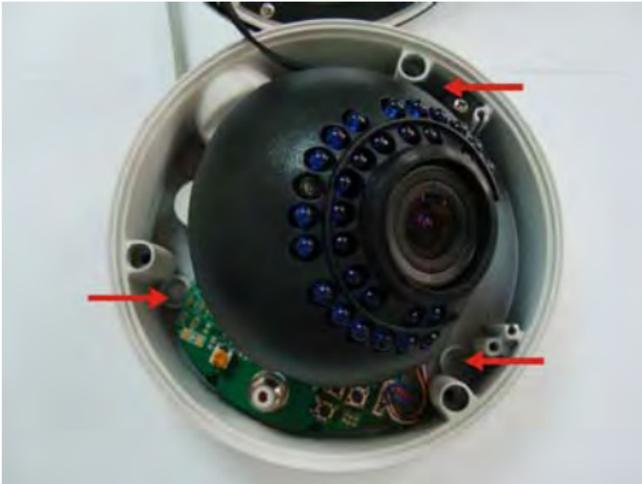


4. Arrows point to the 3 holes for ceiling mount screws

5.  Mounting the base to ceiling
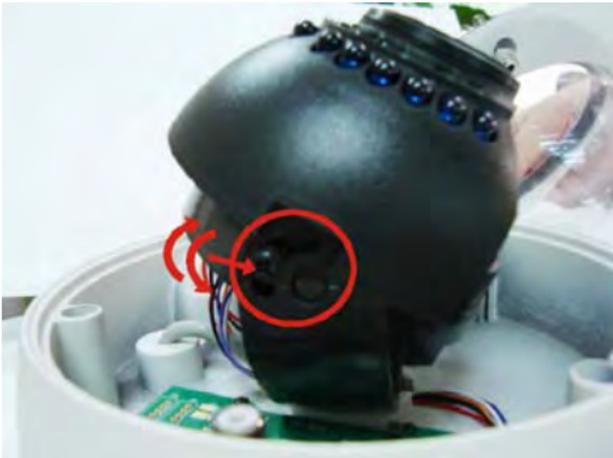


6.  Screws for changing the angle of the lens

7.  Loosen the screws on both sides with a screwdriver



8.  Twist the top to change the left/right angle of the lens

9. Top screw adjusts focus, bottom screw adjusts lens size.



10. Cover of cable pull out hole

11. You can remove the cover with a coin



12. Pull cable through the hole
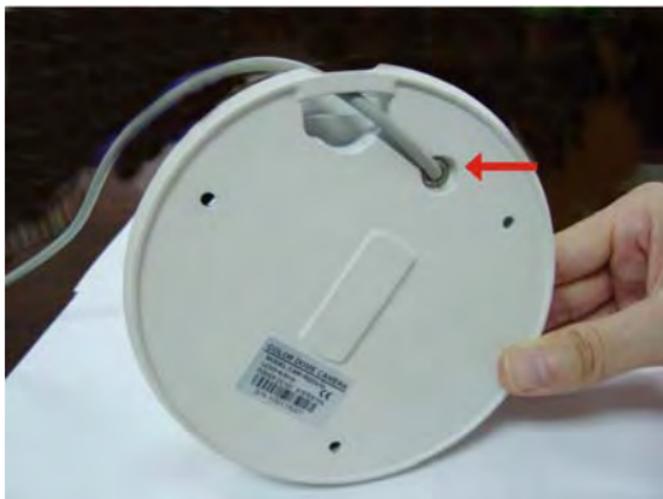
13. Place cable in channel and through side hole



14. Cable through the hole
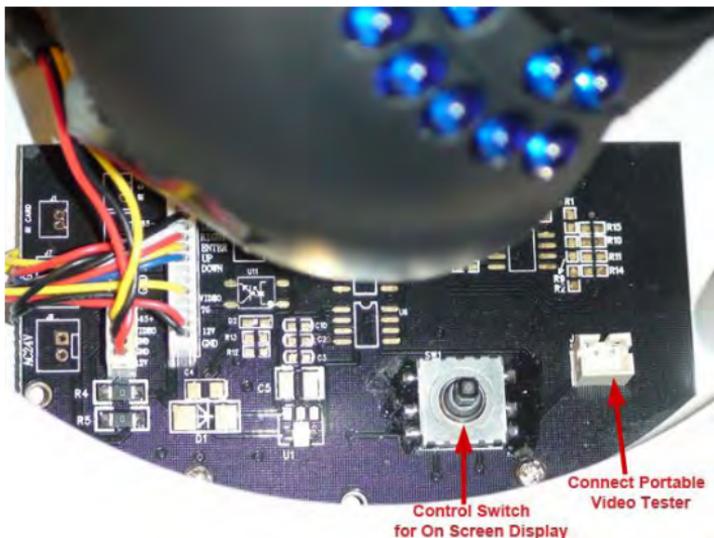
15. Connector for portable video tester if needed by the installer, the black button is for operating OSD (On Screen Display).

# 4. Circuit Board Layout

QSC13212D Dome Camera Circuit Board
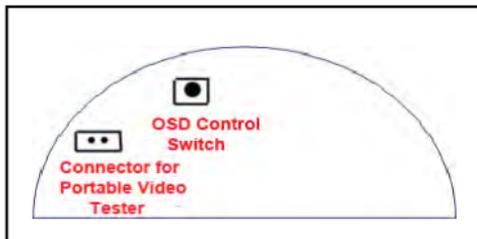
4.2 On Screen Display Switch
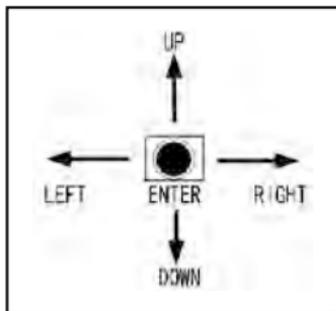


| ENTER | Press to Enter or Exit the menu |
|---|---|
| UP/DOWN | Tilt toward UP and DOWN to move up and down in menu |
| LEFT/RIGHT | Tilt toward LEFT, RIGHT for modifying the menu parameters , press RIGHT to move to the next menu and modify the parameter. |

# 5. **OSD (On Screen Display) Operation**

Press the "OK" to enter main menu, if the button is not pressed for 90 seconds, the main menu will disappear automatically from the screen.

## 5.1 Exposure

When the cursor stops on "exposure", press "Ok" button to enter "exposure" to set the parameters.
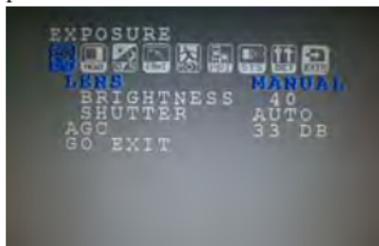


➢ Lens

There are two kinds of options, automatic or manual; depending on the specific type of the lens.

➢ Lens Brightness

User can adjust image brightness from 0 to 100, depending on the lightness of surroundings. The default value is 35.

➢ Electronic Shutter

Electronic shutter is to set the camera shutter speed, that is, the video output per second (1 / 50, means the camera can output 25 pictures per second). User can set both slow and high-speed shutter. ( The speed can be set as auto, from 1 / 50 ~ 1 / 100000. The user can set the specific speed according to the specific surroundings. The default value is auto. )

➢ AGC (Auto Gain Control)

This function not only increases the brightness of camera images, but also increases the image noise, users can adjust it from 12DB-33DB or shut it down according to actual situation.

➢ Exit

When the setup is complete, click "Up", "Down" to move the cursor to "return", then press "OK", "Exit" dialog will appear, select" Exit "(Exit menu, do not save the settings of parameters) or "factory original settings" (it means to reset to factory settings ) or "Save & Exit" (save the changes of parameters and then exit the menu) and then press "OK" to perform the corresponding return functions.

Please refer to the above description to operate "exit".

## 5.2 Color

Move the cursor to "RGB" icon, click "OK" to enter the White Balance menu to set relevant parameters.



➢ White Balance

This is used to restore the authenticity of the color, affected by the change of color temperature. Users can choose white balance mode according to the actual situation: Auto White Balance / Auto-tracking White Balance / Lock White Balance / Manual White Balance respectively.

Manual - Red

Manual white balance can be adjusted, the default value is 100.

Manual - Blue

Manual white balance can be adjusted, the default value is 100.

➢ Red Gain

Adjust the red value.

➢ Blue Gain

Adjust the blue value.

## 5.3 Day & Night Switch

Day & Night Switch is specially designed for different occasions. There are four kinds of modes as follows: automatic mode, color mode, B/W mode, and external switch. The user can set different modes according to the surroundings.



➢    Color Signal

Set menu to display color or not

➢    Color to B/W Settings

When the mode is "external control", user can't adjust it. This is color to B/W accumulated light intensity, when it reaches "alternating light" state, camera could be damaged by frequent switching. It might cause it to not correctly judge the image and reduction of life span of the camera.

➢    B/W to Color Settings

When the mode is "external control", user can't adjust it. This is B/W to color accumulated light intensity, when it reaches "alternating light" state, camera could be damaged by frequent switching. It might cause it to not correctly judge the image and reduction of life span of the camera.

➢    Delay Time

This means when the light begins to alternate between states, the system can make it delay a while ensuring the light is fully within this switching range.

➤ CDS Control

The filter switch will be controlled by the photocell, and it can work only in external control mode.

## 5.4 Function



➤ Mirror

Left or Right Mirror can be set when turning on the mirror switch.

➤ Sharpness adjustment

Adjust the image sharpness from 0-50.

➤ Peripheral Brightness Compensation

If you need to compensate brightness, set switch to ON and move the cursor down to "Peripheral Brightness Compensation" and adjust the value from"0-50".

➤ Strong Light Reversion

If you need to adjust for strong light, set switch to ON and move the cursor down to "Strong Light Reversion" and adjust the value from"0-50".

➤ Gamma

Adjust the gamma value, there are several different mode options, different modes will give different ways of handling the bright and dark area of the image. The user should select appropriate mode to achieve the most optimized image for different situations. Value range is from 0.05-1.0, the default value is: 0.45.

➤ Backlight Compensation

If there is backlighting in the external environment, you can use this function. First, set switch to "ON", move the cursor down to "Backlight Compensation" and adjust the value from"0-50".

➤   Wide Dynamic Compensation

This is digital wide dynamic function, you can adjust its value in order to achieve the best results, the values are: 60DB, 80DB, 100DB.

## 5.5 Motion Detection **(This camera does not have this feature)**

Mainly used for setting the image motion detection and alarm linkage function.



## 5.6 Privacy Zone
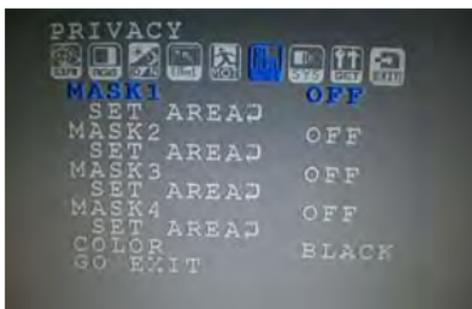


"Privacy Zone" is mainly used for special places or special surroundings, for this camera there are four zones set for privacy. The color of "Privacy Zone" can also be set as one kind of "red, blue, and black". First, in the area to choose whether to open "Privacy Zone", selecting "off" indicates that this zone does not participate in privacy, selecting "On" indicates that this zone participates in the privacy.

Move the cursor to "Setting Zone", press "OK" to enter "Privacy Zone setting". Press "Left, Up" to set privacy position, after setting is finished, press "OK", then "Right, Down" to set the privacy position, after setting is finished, press "OK" to select the color. And click "Left, Right" to exit setting.

## 5.7 Camera ID **(This camera does not use this feature)**

Used for setting the camera's address, communication protocol and baud rate.



## 5.8 Camera Settings



➤    Title Display

The title can be set ON or OFF.

➤    Title Edit

Move the cursor to "Title Edit", Click "OK" to enter the title setting. Up to16 letters, numbers & symbols can be used as "Title".
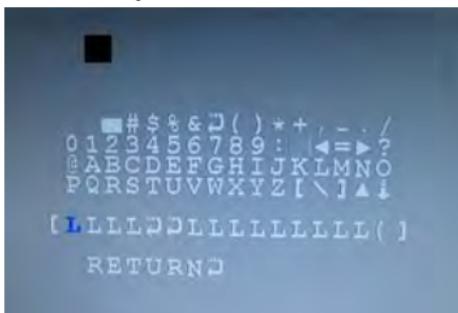
Move the cursor to the input column, press "OK"-the cursor will be moved to the above input character column, after selecting characters, press "OK", the cursor will be moved to the next input position. If you need additional settings, please refer to the above operation. After finished inputting, move cursor to "RETURN" click "OK" to return to the previous menu.

➢ Title Reset

Restore the title setting, which is used to clear the previous title.

➢ Title Position

Enter the title position to move the title up and down, after confirming the position click "OK" to exit the setting.

➢ Title Background

Set the title background.

➢ Auto-completion-point

Set the black point and white point as auto-completion-point numbers.

➢ Language

Press "left, right" to select language. Chinese & English are currently available.

**5.9 Exit**



When all settings are complete, press "Up", "Down" to move the cursor to "Return", then press "OK", "Exit" dialog will appear, select" Exit "(Exit menu, do not save the settings of parameters) or "factory original settings" (it means to return to factory settings ) or "Save & Exit" (save the changes to parameters and then exit the menu) and then press "OK" to perform the corresponding return functions.

# 6. Technical Specifications

| Function | | QSC13212D Dome Camera |
|---|---|---|
| **General Functions** | Imaging Sensor | 1 / 3" SUPER HAD ‖ hi-sensitivity CCD & DSP |
| | Sensor Area | 4.9mm x 3.7mm |
| | Lens Size | 2.8mm to 12mm Manual Varifocal |
| | Pixels | PAL: 752（H）×582（V）; NTSC: 768（H）×494（V） |
| | Signal System | PAL or NTSC |
| | Syn. System | Power Synchronization / Internal Synchronization |
| | Shutter speed | PAL:1/50～1/100000s; NTSC:1/60～1/100000s |
| | S/N Ratio | More than 58dB（AGC OFF） |
| | Video Output | 1.0Vp-p, 75 ohms, negative sync |
| | Horizontal resolution | Color 550TVL, B/W 600TVL |
| | Mini. Illumination | Color:0.1Lux (F1.2, 50IRE, AGC ON), B/W:0.001Lux (F1.2, 50IRE, AGC ON) |
| | IR Distance | 25M（80ft） |
| | IR Leds | 30pcs φ5mm |
| | Wave length | 850nm |
| | D/N Switch | Auto/Color/B/W/External Control |
| | Brightness Switch | Color to B/W & B/W to Color for option |
| | D/N Switching Time | 3s～12s Optional |
| | Title setting | 16 characters |
| | Title Position | Any position on the Screen |
| Special functions | Image Brightness | 0～100 adjustable |
| | AGC | 0dB～33dB adjustable |
| | OSD Control | English/Chinese OSD |
| | Peripheral Brightness Compensation（BLC） | On/Off , 0～50 adjustable |
| | Strong Light Reversion | On/off, 0～50 adjustable |
| | Backlight Compensation | 0～30 adjustable |
| | Privacy Zone | 1～4 Zones for setting privacy areas |
| | Privacy Zone Color | Black/Grey/Color. 1-6 Colors optional |

| | | |
|---|---|---|
| | Wide dynamic compensation | 60dB, 80dB, 100dB optional |
| | AWB | Manual / Auto / Auto Tracking |
| | Mirror | On/Off |
| | Sharpness adjustment | 0 ~ 50 adjustable |
| | Gamma Correction | 0.3 ~ 1.0 adjustable |
| | CCD white Point Auto-detection | Not supported |
| | Auto-completion point | white and black points automatically added |
| | Menu Background | On/Off |
| Power & Other Parameters | Power Supply | DC12V 300mA/AC24V(optional) |
| | Power Consumption | 2.5W; 7W(IR) |
| | Operation Temperature | $-20^0$C ~ $+50^0$C (-4 to 122°F) |
| | Operation Humidity | 20 ~ 80% |
| | Storage Temperature | $-40^0$C ~ $+60^0$C (-40°F to 140°F) |
| | Storage Humidity | 20 ~ 95% |
| | Weight (kg) | 1.20 (42.33 oz) |

# 7. FAQs

**1. Q: No image after installation?**
A: a. Check the power supply connections, try plugging into different surge protector and a different power outlet. and whether the indicating led is always on or not;

b. Check the video cable, make sure it is ok.

c. Make sure the monitor is on.

**2. Q: Image interference after installation?**
A: a. Check the output from the power supply, try plugging into different surge protector and a different power outlet.

b. Check if electromagnetic interference exists in the area, please use some anti-interference devices. Try using insulated video cable.

**3. Q: Camera image can't switch into B/W at night?**
A: Open the camera menu to see if "Day/Night Switch" is set as AUTO, if not, please change it to AUTO.

**4. Q: Noise is very obvious at night with low illumination.**
A: Make sure AGC is ON.

**5. Q: The image color is abnormal?**
A: a. Make sure the white balance is correctly set as Auto White Balance.

b. Enter the menu to restore factory settings.

**6. Q: Image appears to be whiter than usual after installation?**
A: Check whether the lens aperture was adjusted too large, so that the image appears whiter.

b. Check if the brightness of the monitor is set too high.

**7. Q: On installation, image is not clear or has dark corners?**
A: a. Adjust focus and zoom of the lens. Make sure the focus is set properly

b. Make sure the lens is clean.

Please contact us using the following methods with questions about your Q-See product.

# Q-See Products

**8015 E. Crystal Dr.**

**Anaheim, CA 92807**

**Email:**

Customer Service

cs@dpsi-usa.com

Technical Support

ts@dpsi-usa.com

Online Live Web Chat Visit:

www.q-see.com

**Telephone:**

Customer Service

**1.877.998.3440 x 538**

Technical Support

**1.877.998.3440 x 539**

Fax:

**1.714.998.3509**

# Q-See Product Warranty

Thank you for choosing our products.

All of our products users have a conditional free warranty repair service for hardware within 12 months starting from purchase date, and a free exchange service within one month (valid for manufacturing defects). Permanent upgrading service is provided for the software.

Liability Exclusions:

Any product malfunction, abnormalities in operation or damage caused by following reasons are not within the free service scope of our company. Please select payable service.

(1) Equipment damage caused by improper operation

(2) Improper environment and conditions in/on which the equipment operates, e.g., improper power, environment temperature, humidity and lightening strike etc. that cause equipment damage.

(3) Damage caused by acts of nature: earthquake and fire etc.

(4) Equipment damage caused by the maintenance of personnel not authorized by our company.

(5) Product sold over 12 months ago.

In order to provide various services to you, please complete registration procedure after you purchase the product. Cut off or copy User's Information Card and fax or mail it to us after the card is filled in. You can also register the product by going to the www.q-see.com website and clicking on the Register link.

The material in this document is the intellectual property of our company.

No part of this manual may be reproduced, copied, translated, transmitted, or published in any form or by any means without our company's prior written permission.

1. Our products are under continual improvement and we reserve the right to make changes without notice. But no guarantee is given as to the correctness of its contents.

2. We do not accept any responsibility for any harm caused by using our product.

3. The product picture may differ from the actual product, which is only for your reference. The accessories will probably be different according to the different selling areas. For details of accessories, please refer to your local distributor.

# Customer Information Card

| | |
|---|---|
| **User's Name** | **Mr./Mrs.** |
| **Company Name** | |
| **Postal Address** | |
| **Postal code** | |
| **Phone Number** | |
| **E-mail** | |
| **Model Number of Product** | |
| **Serial Number of Product** | |
| **Purchase Date** | |
| **Distributor** | |